		Exploring Aeror	nautics				
2002 Mathematics Academic Standards							
Grade 5							
Activity/Lesson	State	Standards					
			Select and use appropriate instruments and				
Fundamentals of			units for measuring quantities (e.g., perimeter,				
Aeronautics (145-176)	PA	MA.5.2.3.5.A	volume, area, weight, time, temperature).				
			Select and use standard tools to measure the				
Fundamentals of			size of figures with specified accuracy, including				
Aeronautics (145-176)	PA	MA.5.2.3.5.B	length, width, perimeter and area.				
Formula manufactura f			Show ideas in a variety of ways, including				
Fundamentals of	D4	MA 5 0 5 5 0	words, numbers, symbols, pictures, charts,				
Aeronautics (145-176)	PA	MA.5.2.5.5.C	graphs, tables, diagrams and models.				
Fundamentals of			Organize and display data wains mistures talling				
	DA	MAFAGEA	Organize and display data using pictures, tallies,				
Aeronautics (145-176)	PA	MA.5.2.6.5.A	tables, charts, bar graphs and circle graphs.				
Fundamentals of			Describe a realistic situation using information				
Aeronautics (145-176)	DΛ	MA.5.2.8.5.F	given in equations, inequalities, tables or graphs.				
Aeronaulics (145-170)	ГА	IVIA.3.2.6.3.F	Select and use appropriate instruments and				
			units for measuring quantities (e.g., perimeter,				
Wings(177-208)	PA	MA.5.2.3.5.A	volume, area, weight, time, temperature).				
vvilig5(177-200)	FA	IVIA.3.2.3.3.A	Select and use standard tools to measure the				
			size of figures with specified accuracy, including				
Wings(177-208)	PA	MA.5.2.3.5.B	length, width, perimeter and area.				
VVIIIg3(177-200)		IVIA.3.2.3.3.D	Demonstrate skills for using fraction calculators				
Tools of			to verify conjectures, confirm computations and				
Aeronautics(257-326)	PA	MA.5.2.2.5.F	explore complex problem-solving situations.				
71011001100(201 020)	171	1717 (.O.Z.Z.O.1	Construct two- and three-dimensional shapes				
The Tools of			and figures using manipulatives, geoboards and				
Aeronautics	PA	MA.5.2.9.5.E	computer software.				
7.0.0.0.00			Demonstrate skills for using fraction calculators				
			to verify conjectures, confirm computations and				
Science of Flight	PA	MA.5.2.2.5.F	explore complex problem-solving situations.				
J .			Select and use appropriate instruments and				
			units for measuring quantities (e.g., perimeter,				
Science of Flight	PA	MA.5.2.3.5.A	volume, area, weight, time, temperature).				
			Demonstrate skills for using fraction calculators				
Integrating with			to verify conjectures, confirm computations and				
Aeronautics	PA	MA.5.2.2.5.F	explore complex problem-solving situations.				
			Select and use appropriate instruments and				
Integrating with			units for measuring quantities (e.g., perimeter,				
Aeronautics	PA	MA.5.2.3.5.A	volume, area, weight, time, temperature).				
			Select and use standard tools to measure the				
Integrating with			size of figures with specified accuracy, including				
Aeronautics	PA	MA.5.2.3.5.B	length, width, perimeter and area.				
Integrating with			Compare quantities and magnitudes of				
Aeronautics	PA	MA.5.2.4.5.A	numbers.				
Integrating with			Draw inductive and deductive conclusions within				
Aeronautics	PA	MA.5.2.4.5.C	mathematical contexts.				

Integrating with Aeronautics	PA	MA.5.2.5.5.B	Use appropriate mathematical terms, vocabulary, language symbols and graphs to explain clearly and logically solutions to problems.
Integrating with			Show ideas in a variety of ways, including words, numbers, symbols, pictures, charts,
Aeronautics	PA	MA.5.2.5.5.C	graphs, tables, diagrams and models.
Scientific Method(124-		IVIA.3.2.3.3.0	Draw inductive and deductive conclusions within
144)	PA	MA.5.2.4.5.C	mathematical contexts.
,			
Scientific Method(124-			Organize and display data using pictures, tallies,
144)	PA	MA.5.2.6.5.A	tables, charts, bar graphs and circle graphs.
Scientific Method(124-			Construct and defend simple conclusions based
144)	PA	MA.5.2.6.5.E	on data.
		Exploring Aeror	nautice
		2002 Mathem	
		Academic Stan	
Pennsylvania Mathen	natics	100000000000000000000000000000000000000	
Grade 8			
Activity/Lesson	State	Standards	
			Verify and interpret results using precise
			mathematical language, notation and
			representations, including numerical tables and
Fundamentals of			equations, simple algebraic equations and
Aeronautics (145-176)	PA	MA.8.2.5.8.B	formulas, charts, graphs and diagrams.
			Use scientific and graphing calculators and
Fundamentals of			computer spreadsheets to organize and analyze
Aeronautics (145-176)	PA	MA.8.2.6.8.F	data.
_ , , , ,			Present the results of an experiment using
Fundamentals of	D.4		visual representations (e.g., tables, charts,
Aeronautics (145-176)	PA	MA.8.2.7.8.B	graphs).
Cundomontolo of			Represent relationships with tables or graphs in
Fundamentals of	DA	NAA 0 2 0 0 C	the coordinate plane and verbal or symbolic rules.
Aeronautics (145-176)	PA	MA.8.2.8.8.G	Develop formulas and procedures for
			determining measurements (e.g., area, volume,
Wings(177-208)	PA	MA.8.2.3.8.A	distance).
VIIIg3(177-200)		W/A.O.Z.O.O.A	Draw, label, measure and list the properties of
Airplane Control(209-			complementary, supplementary and vertical
256)	PA	MA.8.2.9.8.B	angles.
/			Construct parallel lines, draw a transversal and
Airplane Control(209-			measure and compare angles formed (e.g.,
256)	PA	MA.8.2.9.8.E	alternate interior and exterior angles).
,			Solve and graph equations and inequalities
Tools of			using scientific and graphing calculators and
Aeronautics(257-326)	PA	MA.8.2.8.8.F	computer spreadsheets.
The Tools of			
Aeronautics	PA	MA.8.2.3.8.G	Create and use scale models.
			Solve and graph equations and inequalities
The Tools of			using scientific and graphing calculators and
Aeronautics	PA	MA.8.2.8.8.F	computer spreadsheets.

			Distinguish between and order rational and
The Resource Center	PA	MA.8.2.1.8.C	irrational numbers.
			Use the number line model to demonstrate
The Resource Center	PA	MA.8.2.1.8.F	integers and their applications.
			Apply simple algebraic patterns to basic number
The Resource Center	PA	MA.8.2.8.8.A	theory and to spatial relations.
			Justify strategies and defend approaches used
Science of Flight	PA	MA.8.2.5.8.C	and conclusions reached.
			Compare and contrast results from observations
Science of Flight	PA	MA.8.2.7.8.D	and mathematical models.
			Solve and graph equations and inequalities
			using scientific and graphing calculators and
Science of Flight	PA	MA.8.2.8.8.F	computer spreadsheets.
			Identify the difference between exact value and
Integrating with			approximation and determine which is
Aeronautics	PA	MA.8.2.2.8.F	appropriate for a given situation.
			Represent relationships with tables or graphs in
Integrating with			the coordinate plane and verbal or symbolic
Aeronautics	PA	MA.8.2.8.8.G	rules.
Scientific Method(124-			Combine numeric relationships to arrive at a
144)	PA	MA.8.2.4.8.B	conclusion.
Scientific Method(124-			Justify strategies and defend approaches used
144)	PA	MA.8.2.5.8.C	and conclusions reached.
			Use scientific and graphing calculators and
Scientific Method(124-			computer spreadsheets to organize and analyze
144)	PA	MA.8.2.6.8.F	data.